## SANTA CRUZ BIOTECHNOLOGY, INC.

# ATP5C1 siRNA (h): sc-90619



## BACKGROUND

ATP5C1 (ATP synthase, H<sup>+</sup> transporting, mitochondrial F1 complex,  $\gamma$  polypeptide 1), also known as ATP5C or ATP5CL1, is a 298 amino acid protein that belongs to the ATPase  $\gamma$  chain family. F-type ATPases, such as ATP5C1, consist of two components: CF1, a soluble, catalytic core that consists of five subunits ( $\alpha$ 3,  $\beta$ 3,  $\gamma$ 1,  $\delta$ 1 and  $\epsilon$ 1), and CF0, a membrane proton channel that contains three main subunits (a, b and c). ATP5C1 encodes the gamma subunit of the catalytic core. Localizing to both mitochondrial inner membrane and peripheral membrane, ATP5C1 is expressed in heart and skeletal muscle, which require rapid energy supply, as well as brain, liver, kidney, skin, intestine and stomach. ATP5C1 exists as two alternatively spliced isoforms, isoform liver (L) and isoform heart (H), and is encoded by a gene that maps to human chromosome 10p14. ATP5C1 also has a pseudogene on chromosome 14.

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### CHROMOSOMAL LOCATION

Genetic locus: ATP5C1 (human) mapping to 10p14.

### PRODUCT

ATP5C1 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  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see ATP5C1 shRNA Plasmid (h): sc-90619-SH and ATP5C1 shRNA (h) Lentiviral Particles: sc-90619-V as alternate gene silencing products.

For independent verification of ATP5C1 (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-90619A, sc-90619B and sc-90619C.

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

#### **APPLICATIONS**

ATP5C1 siRNA (h) is recommended for the inhibition of ATP5C1 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  $\mu$ M in 66  $\mu$ 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 ATP5C1 gene expression knockdown using RT-PCR Primer: ATP5C1 (h)-PR: sc-90619-PR (20  $\mu$ 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.