

# UCRC siRNA (h): sc-76801

## BACKGROUND

UCRC (cytochrome b-c1 complex subunit 9), also known as ubiquinol-cytochrome c reductase complex 7.2 kDa protein and complex III subunit X (UQCR10), is a 63 amino acid mitochondrial inner membrane protein that is a component of the ubiquinol-cytochrome c reductase complex, a part of the mitochondrial respiratory chain. This complex consists of eleven subunits and interacts with cytochrome c1. Ubiquinol cytochrome c reductase (complex III) deficiency results when any of the genes encoding the subunits is missing or defective, and causes cardiomyopathy, Leber's myopathy and fatal infant conditions. UCRC is highly expressed in skeletal muscle and heart, where its levels have been shown to be influenced by ovarian hormones. Interestingly, UCRC expression in the heart increases in response to cardiac hypertrophy and hypertension.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: UQCR10 (human) mapping to 22q12.2.

## PRODUCT

UCRC 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 UCRC shRNA Plasmid (h): sc-76801-SH and UCRC shRNA (h) Lentiviral Particles: sc-76801-V as alternate gene silencing products.

For independent verification of UCRC (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-76801A, sc-76801B and sc-76801C.

## 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

UCRC siRNA (h) is recommended for the inhibition of UCRC 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 UCRC gene expression knockdown using RT-PCR Primer: UCRC (h)-PR: sc-76801-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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.