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SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

SANTA CRUZ BIOTECHNOLOGY, INC.

UQCRB siRNA (m): sc-154932

BACKGROUND

UQCRB (ubiquinol-cytochrome c reductase binding protein), also known as complex III subunit VII, ubiquinol-cytochrome c reductase complex 14 kDa protein and QCR7, is a 111 amino acid mitochondrion inner membrane protein. UQCRB is a component of the ubiquinol-cytochrome c reductase complex, also known as complex III or cytochrome b-c1 complex, which is a constituent of the mitochondrial respiratory chain. The ubiquinol-cytochrome c reductase complex is composed of two core proteins (UQCRC1 and UQCRC2), three respiratory subunits (cytochrome c1, cytochrome b and Rieske) and six low-molecular weight proteins (UQCRH, UQCRB, QP-C, UQCR10, UQCR11 and a cleavage product of Rieske). UQCRB binds ubiquinone and is involved in the transfer of electrons across the mitochondrion inner membrane. Mutations in the gene that encodes UQCRB have been linked to mitochondrial complex III deficiency (CIII deficiency), a condition characterized by congenital lactic acidosis.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: Uqcrb (mouse) mapping to 13 B3.

PRODUCT

UQCRB siRNA (m) is a pool of 2 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see UQCRB shRNA Plasmid (m): sc-154932-SH and UQCRB shRNA (m) Lentiviral Particles: sc-154932-V as alternate gene silencing products.

For independent verification of UQCRB (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-154932A and sc-154932B.

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

UQCRB siRNA (m) is recommended for the inhibition of UQCRB 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 UQCRB gene expression knockdown using RT-PCR Primer: UQCRB (m)-PR: sc-154932-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.