

DECR2 siRNA (h): sc-93455

BACKGROUND

DECR2 (2,4-dienoyl-CoA reductase 2), also known as PDCR (peroxisomal 2,4-dienoyl-CoA reductase) or SDR17C1, is a 292 amino acid member of the short-chain dehydrogenases/reductases (SDR) protein family and the 2,4-dienoyl-CoA reductase protein subfamily. Localized to the peroxisome, DECR2 is an auxiliary enzyme of β -oxidation that catalyzes the NADP-dependent reduction of 2,4-dienoyl-CoA to yield *trans*-3-enoyl-CoA. DECR2 has also been shown to have catalytic activity towards 2,4,7,10,13,16,19-docosaheptaenoyl-CoA and short and medium chain 2,4-dienoyl-CoAs, suggesting that DECR2 is not a rate limiting step in the degradation of docosahexaenoic acid in the peroxisome. DECR2 is expressed as three isoforms produced by alternative splicing events.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: DECR2 (human) mapping to 16p13.3.

PRODUCT

DECR2 siRNA (h) 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 μ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see DECR2 shRNA Plasmid (h): sc-93455-SH and DECR2 shRNA (h) Lentiviral Particles: sc-93455-V as alternate gene silencing products.

For independent verification of DECR2 (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-93455A and sc-93455B.

PROTOCOLS

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

DECR2 siRNA (h) is recommended for the inhibition of DECR2 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.

GENE EXPRESSION MONITORING

DECR2 (8D7): sc-134312 is recommended as a control antibody for monitoring of DECR2 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor DECR2 gene expression knockdown using RT-PCR Primer: DECR2 (h)-PR: sc-93455-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.