SANTA CRUZ BIOTECHNOLOGY, INC.

PPC-DC siRNA (h): sc-90137

BACKGROUND

Phosphopantothenoylcysteine decarboxylase (PPC-DC) is a 204 amino acid protein that plays a role in the biosynthesis of coenzyme A (CoA) from pantothenate (vitamin B). CoA is an essential cofactor in all living organisms and is involved in several key biochemical pathways, including the tricarboxylic acid cycle and fatty acid metabolism. Altered CoA levels are associated with aberrant mitosis and meiosis in flies and the neurodegenerative Hallervorden-Spatz syndrome in humans. The biosynthesis of CoA from pantothenate requires several steps: the phosphorylation of pantothenate, the conversion of 4'-phosphopantothenate to 4'-phosphopantetheine, the adenylation by phosphopantetheine adenylyltransferase to form dephospho-CoA and the phosphorylation by dephospho-CoA kinase to form CoA. PPC-DC plays a direct role in this pathway by converting 4'-phosphopantothenate into 4'-phosphopantetheine. Potentially forming a homotrimer, PPC-DC has two named isoforms produced by alternative splicing.

REFERENCES

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PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: PPCDC (human) mapping to 15q24.2.

PRODUCT

PPC-DC 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 µM solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see PPC-DC shRNA Plasmid (h): sc-90137-SH and PPC-DC shRNA (h) Lentiviral Particles: sc-90137-V as alternate gene silencing products.

For independent verification of PPC-DC (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-90137A, sc-90137B and sc-90137C.

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

PPC-DC siRNA (h) is recommended for the inhibition of PPC-DC 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 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 PPC-DC gene expression knockdown using RT-PCR Primer: PPC-DC (h)-PR: sc-90137-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.