SANTA CRUZ BIOTECHNOLOGY, INC.

DPYS siRNA (h): sc-77763

BACKGROUND

DPYS (dihydropyrimidinase), also known as DHPase, Hydantoinase or DHP, is a 519 amino acid protein that is expressed in liver and kidney tissue and belongs to the DHOase family. Functioning as a homotetramer, DPYS uses zinc as a cofactor to catalyze the second step of reductive pyrimidine degradation, namely the conversion of 5,6-dihydrouracil to 3-ureidopropionate. DPYS is subject to post-translational carbamylation, an event which enhances the ability of DPYS to bind zinc ions. Defects in the gene encoding DPYS are the cause of DHP deficiency, an autosomal recessive disorder that is characterized by epileptic or convulsive attacks, dysmorphic features and severe developmental delay and congenital microvillous atrophy.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: DPYS (human) mapping to 8q22.3.

PROTOCOLS

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

PRODUCT

DPYS 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 DPYS shRNA Plasmid (h): sc-77763-SH and DPYS shRNA (h) Lentiviral Particles: sc-77763-V as alternate gene silencing products.

For independent verification of DPYS (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-77763A, sc-77763B and sc-77763C.

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

DPYS siRNA (h) is recommended for the inhibition of DPYS 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 DPYS gene expression knockdown using RT-PCR Primer: DPYS (h)-PR: sc-77763-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.